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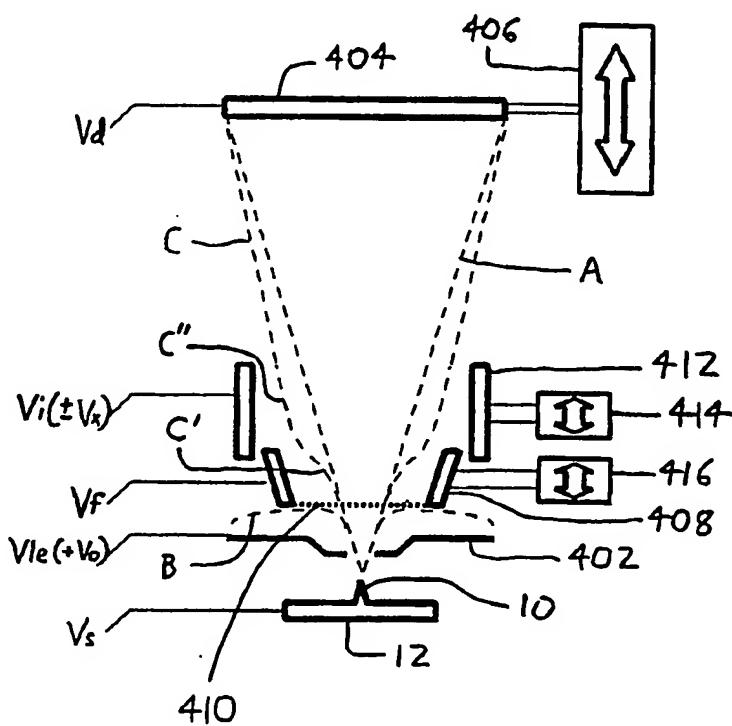
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[Continued on next page]

(54) Title: HIGH RESOLUTION ATOM PROBE



(57) Abstract: An atom probe includes one or more intermediate electrodes between its local electrode and its detector, wherein the intermediate electrode(s) are charged to potentials such that they filter spurious ions and prevent them from reaching the detector, and/or adapt (focus) the flight cone of the ions to have a narrower or wider angle, thereby adjusting the magnification and field of view of the image provide by the atom probe. A preferred arrangement is to provide both filtering electrodes and focusing electrodes which are movable with respect to each other, and which may be telescopically interfitt, so as to provide a range of filtering and focusing effects.



*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

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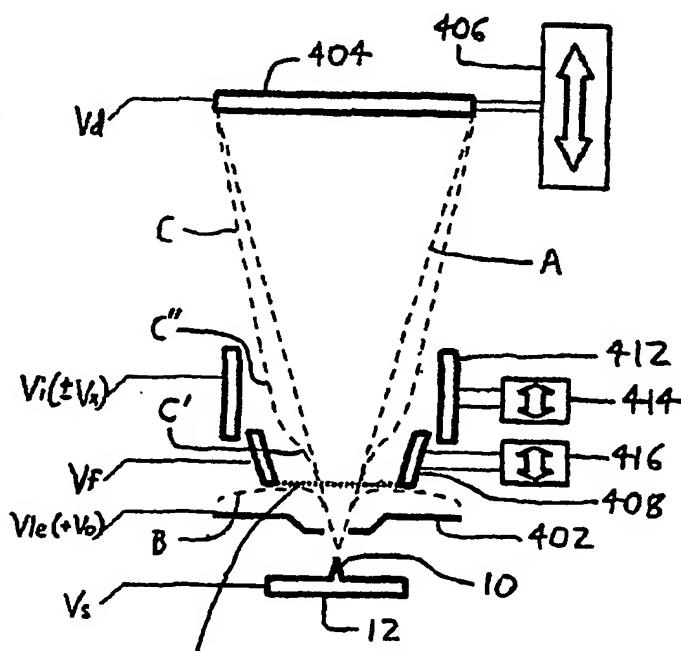
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(54) Title: HIGH RESOLUTION ATOM PROBE



(57) Abstract: A three dimensional atom probe comprising a sharp specimen (10) coupled to a mounting means (12) where emission of charged particles is caused by application of a potential to the specimen tip (10) such that charged particles are influenced by filtering electrodes (206, 204) before impingement on a detection screen (202).